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DIGITAL FANBASES: HOW THE ATHLETIC DEPARTMENT IN THE OHIO ATHLETIC CONFERENCE ENGAGE WITH AUDIENCES

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DIGITAL FANBASES: HOW ATHLETIC DEPARTMENTS IN THE
OHIO ATHLETIC CONFERENCE ENGAGE WITH AUDIENCES

An Essay Submitted to the
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Master of Arts

By
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Introduction

Research has long sought to define and quantify the component of relationships within strategic public relations management. With the development of social media, public relations practitioners have new methods to employ in building and maintaining two-way relationships with audiences and key publics. This study is intended to expand upon current organization-management research and identify best practices for athletic departments seeking to engage with their audiences. The development of organization-public models is detailed, along with the historical application of the concept to athletics. Analysis of Twitter data revealed common themes among athletic departments that engage audiences successfully. The study concludes with a review of successful engagement techniques and questions for future model studies.

Literature Review

Relationships and Public Relations

The practice of public relations is defined as “a strategic communications process that builds mutually beneficial relationships between organizations and their publics” (Smith, 2013, p. 41). Public relations athletic departments are the gateway between a given organization and the groups of people considered most important to that organization’s success. While dedicated relationship building and management are vital parts of public relations success, researchers have struggled for decades to define best practices. The field has only begun to develop framework from which to study relationships in recent decades.

Two-way, engaged and reciprocal communication is a hallmark of current public relations research. However, the reality is that relationships were not always the focus of

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public relations research. It was not until the mid-1960s when researchers began to emphasize the importance of relationships to corporations. Wiebe (1963) called for progress in public relations that “lies less in further refinements of image measurement than in re-examining the nature of company-public relationships” (p. 14). Wiebe’s more focused approach called for placing a higher value on measuring relationships rather than corporate image measurements.

Measuring Relationships

In the 1980s, scholars began to take Wiebe’s advice and examine relationships as a key component of strategic public relations management. Ferguson (1984) positioned relationships as the central unit of public relations research. The attributes of research proposed marked the first attempt to quantify relationships. Attributes for behavioral relationships included dynamic vs. static, open vs. closed, mutual satisfaction, distribution of power, and mutual understanding, agreement, and consensus. Choosing and managing the correct attributes could lead to stronger relationships with publics (Ferguson, 1984).

Despite the development of this theoretical framework, Broom and Dozier (1990) were critical of the lack of specificity in the models. While “public relations programs affect the relationships between organizations and their publics ... rarely is program impact on the relationships themselves measured” (Broom & Dozier, 1990, p.4). They introduced relationships as a situation with a fixed starting point that can be tracked over time. Researchers set out to quantify those efforts. Grunig (1993) expanded Ferguson’s (1984) list of attributes, adding perceptions, and constructs that measure relationships. Grunig contended that trust, credibility, and reciprocity should be measured, as well as

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mutual legitimacy. Grunig asserted that those categories, along with openness, mutual satisfaction, and mutual understanding were the key measurement points of behavioral relationships (Grunig, 1993).

Grunig (1993) imagined a potential model as a two-way system in which there were continual reciprocal exchanges between organizations and publics. Grunig claimed that public relations lost value to its organization and key publics when image was placed before behavioral attributes. Relationships built on trust, openness, and reciprocity serve as proof to organizations that their public relations efforts contribute to their overall goals. The overall concept of mutual benefit is crucial to the Grunig model (Grunig, 1993).

Ledingham and Bruning (1998) agreed with Grunig (1993), defining relationships as the “state which exists between an organization and its key publics...impacting the economic, social, political, and/or cultural well-being of the other entity” (p. 62). Essentially, the relationship exists if there is mutual positive regard between the two parties. Their efforts to quantify those relationships expanded further beyond the broad categories of Ferguson (1984) and Grunig (1998).

Bruning and Ledingham (1999) proposed the Organization-Public Relationship (OPR) model. They built the model on a ten-point scale that harnessed multiple items and multiple dimensions. The elements of trust, openness, involvement, investment, commitment is included, as well as reciprocity, mutual legitimacy, and mutual understanding. The researchers were testing Ferguson’s (1984) research. Bank officials in a Midwestern city were asked to contact customers and ask them statements about their

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relationship with the bank. Each dimension above was represented through multiple statements (Bruning & Ledingham, 1998).

Factor analysis eliminated some dimensions. Out of this research came the concept of OPR as multidimensional, with three specific relationship components: professional, personal, and community. The professional relationship dimension involved how customers felt they were treated in their professional dealings with the bank. The personal relationship dimension asked whether customers believed that banks invested in and understood them personally. Finally, the community dimension concerned whether customers felt that the bank invested in causes and events that they cared about (Bruning and Ledingham, 1999).

Bruning and Ledingham (1999) argued that developing a strategic approach to all three dimensions was crucial. A professional relationship is managed properly when the business needs of the customer are met, when the public invests financially in the organization, and when those services that are invested in are delivered in a professional manner. Personal relationships are well-managed when an organization tries to build trust with key publics. It puts a premium on interaction with those publics, including energy, thought, time, and feelings (Bruning & Ledingham, 1999).

Finally, community relationship management is nurtured through openness with key publics, as well as working to improve the community in which the organization exists. Bruning and Ledingham (1999) proposed that by using the three relationship dimensions, organizations could refine their approach and better target their key publics. The multi-dimensional approach was the first measurable organization-public relationship model ever proposed. Bruning and Ledingham called for future research to

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expand the model into different industries. The application of this research was expected to reveal insights into how the impact of the three dimensions differ based upon demographics.

Relationships and Athletics

Researchers studying athletics would find the OPR model to be a useful basis for research. In the field of athletics, relationships between athletic departments and fans are vital. Athletic departments rely on fans to support their business through the purchase of merchandise and tickets. Keeping those fans engaged off-the-field is often as important as success on-the-field (Gibbs, O'Reilly, & Brunette, 2014). However, by the time athletic researchers adopted the model, the world of communication had shifted. Ledingham and Bruning's (1998) model could not have accounted for the development of social media.

Defining Social Media Relationships

In 2004, Facebook launched, becoming the first major social media platform, and closing a communication gap across the world. Two years later, Twitter was created, giving organizations another way to interact with publics and develop new relationships. By 2014, an estimated 1.2 billion people worldwide had social media accounts, with roughly 65% logging on at least once per day (Park & Dittmore, 2014).

With these systems came built-in tools for publics to interact with each other, and metrics for organizations to study. Terms such as follower, like, and retweet entered the public lexicon (Kaplan, 2010). Maecke (2016) found that more than 100,000 companies had created brand pages on Facebook. Twitter data demonstrated that 2.2 million

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companies and individuals had verified accounts, or pages that were certified by the company as official.

Online platforms gave communities and publics the ability to have their voices heard, making public relations a true real-time two-way process for the first time. The introduction of social media as a potential strategic relationship management tool led researchers to begin interviewing those people who were taking advantage of the new media. Hennig-Thurau, Gwinner, Walsh, & Gremler (2010) sampled over 2,000 consumers, asking them about their attitudes on electronic word-of-mouth communication (eWOM), or engagement on social media. The sample skewed toward younger generations, with 82.6% of respondents under the age of 40. Respondents identified social interaction as one of their biggest factors to contributing online. The most common reason cited for writing messages online was perceived social benefits, such as a stronger connection to those with whom they were communicating. By commenting, people felt they were increasing their sense of community.

Part of developing that sense of community comes through a deliberately crafted self-identity. Vorvoreanu (2011) interviewed college students about their attitudes about Facebook and their social media habits. Participants revealed that self-presentation was an important reason for their social media usage. Building an online identity meant a full profile of oneself, complete with “likes” and “dislikes” of companies and organizations. While the respondents generally disapproved of corporate Facebook accounts, they found it appropriate to “endorse” those pages because the products were a crucial part of their personal identity (Vorvoreanu, 2011).

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Social media provided the next step in developing true two-way communication between organizations and the public. The college students' dislike of interaction with large companies did not translate equally to small businesses (Vorvoreanu, 2011). In fact, students self-reported following small businesses and choosing to interact with them regularly, including looking for inventories or talking about products (Vorvoreanu, 2011).

Social Media and Athletics

Initially, professional sports organizations did not value social media technology as much as they valued other web technology. Nearly 1-in-5 National Football League (NFL) athletic departments did not have a Facebook page in 2011, while all 32 had a dedicated website (Wallace, 2011). As the technology developed, athletic departments and organizations began to take notice. These groups needed to develop an understanding of what fans and other publics required before building strong relationships.

Williams and Chinn (2010) wrote that the benefits of “using social media to meet relationship-marketing goals [was] significant [and that in] sport it may be particularly relevant in supporting consumers as they become active contributors” (Williams & Chinn, 2010, p. 423). Williams and Chinn asserted that social media could aid organizations in the pursuit of developing fan relationships, specifically regarding repeat merchandise and ticket sales. athletic departments and organizations using strategic relationship marketing practices could see significant competitive advantages (Williams & Chinn, 2010).

Further research revealed that social media did not provide a competitive advantage for all athletic organizations. Analysis of Facebook users revealed that fans

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“liked” team specific pages from the Big 12 Conference at a similar rate as they did the official page representing the entire NCAA. Both types of pages primarily focused on informational posts, with the Big 12 pages (90%) outpacing the NCAA (79%). The Big 12 (12.3%) and NCAA (11%) also posted ticket sales messages at similar rates (Wallace, 2011). Wallace concluded that the scope or size of fan page was not relevant to fans, who were more inclined to engage with content they perceived as useful, regardless of where it was posted.

Gibbs, O'Reilly, and Brunette (2014) surveyed Canadian Football League (CFL) fans, confirming the notion that fans desired to be active contributors. Gibbs, et al. surveyed participants through individual team Twitter accounts, targeting information about overall fanbase habits. The analysis listed gratifications fans sought to achieve through following their athletic departments; fans most wanted to hear up-to-date and immediate news on player and roster moves. Further, fans demanded to know information about the team faster than the public (Gibbs et al, 2014).

With the concept of fan desire understood, Park and Dittmore (2014) studied the relationship between increased engagement with fans and a reciprocal increase in fan support. Park and Dittmore studied undergraduate students at the University of Arkansas, asking questions about team identification, intended word-of-mouth, and consumption of social media.

Analysis revealed correlations among social media consumption, fan identification, and word-of-mouth interaction. Identifying as a fan of team correlated with more frequent word-of-mouth interaction and attendance. Consuming their team's social media made respondents more likely to feel connected to that team, as well as more likely

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to share their fandom with others. Park and Dittmore concluded that social media consumption directly affects the behavioral intention of fans of athletics.

Hambrick (2012) questioned how organizations could best tailor messages to affect fan behavior? Hambrick studied two bicycle races: one local, and one national. The local race had a small social media following, while the national race had a slightly larger presence. Sociograms were used to analyze the data, which was collected over a 15-day period before the race dates. The local race organizer spent much of the two-week period to promote the event; of the 50 messages, 22 were promotional in nature (44%). Fifteen of the 50 messages (30%) were used to interact with potential racers. Ten other messages (20%) had links to photos of course information and layout (Hambrick, 2012).

The national organizer spent less time posting information, with just 19 tweets in the 15-day period. Only six messages (32%) were informational in nature. Ten messages, or 53%, were focused on interacting with racers. The national race was less focused on information, which the authors attributed to the public's wider knowledge of the race. The smaller event relied on the platform to spread information about the event's existence; the national event could take advantage of name recognition and focus on relationship building (Hambrick, 2012). One key takeaway from the study is that there was no substantive correlation between the number of posts and engagement. Hambrick (2012) illustrated the major issue that remained in public relations: communicators felt the need to choose between informing and engaging publics. Simply inundating the public with messages was not as valuable as finding the right message.

As the technologies developed further, the field shifted toward engaging in meaningful dialogue over simply informing publics. Abeza and O'Reilly (2013)

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interviewed eight sport-event directors about their use of social media to build and promote relationships with fans and influencers. All eight cited social media as a key step in reaching their objective of stronger relationships. Race directors found that social media allowed them to have reciprocal interaction with audiences, thus building a foundation of future attendees. Directors also noted that social media gave them a better understanding of their customers and created more effective and knowledgeable sport participants (Abeza & O'Reilly, 2013).

The effectiveness of social media was thrown into question one year later by the same research team. In a content analysis of the social media posts of 24 Canadian National Sport Organizations (NSOs), little relationship dialogue was found. Analysis revealed that NSO Facebook and Twitter posts were more focused on communication than interaction. Only 12 of 24 NSOs used the two sites for interaction purposes; organizations communicated directly with users on only 39.6 percent of posts (Abeza & O'Reilly, 2014).

Researchers of athletics to this point had been unsuccessful in developing a framework for study of the best practices in fan engagement on social media. The analysis of relationship management between fans and athletic departments now mirrored the field's search from twenty years prior. The missing definitions and framework were limiting research. Hipke and Hachtmann (2014) studied Big Ten Conference communications professionals. They found running beliefs and themes among those in the field. Officials believed that social media allowed them to connect with target audiences in a convenient manner, and that it assisted with their focus of building loyalty through engagement (Hipke & Hachtmann, 2014).

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Big Ten officials claimed that the accounts allowed them to be content gatekeepers, steering content, and messages through proper channels (Hipke & Hachtmann, 2014). They concluded that the greatest perceived benefit of social media was “the ease of engagement and instantaneous connection between fans and the athletic departments they love” (Hipke & Hachtmann, 2014, p. 526).

One of the main concerns of officials in the study was how to decide which metrics matter. An inability to measure how well their message was being received frustrated respondents. “It is a matter of not only tracking our ‘likes’ and our followers, but also the engagement rate and making sure they stay loyal to us” (Hipke & Hachtmann, 2014, p. 526). The authors concluded that it was necessary for researchers to expand their view of measurement and metrics before developing a coherent social media strategy.

Content analysis of National Basketball Association (NBA) teams one year later attempted to expand those metrics. Wang and Zhou (2015) collected 5,561 tweets from the official Twitter pages of the 30 NBA athletic departments, categorizing them as per the parameters of Bruning and Ledingham’s (1999) OPR model. In addition, Wang and Zhou added six subcategories to the original model: information and promotion, interactivity, activity/event, fanship, and entertainment. Adding these sports-specific categories was a direct response to Hipke and Hachtmann’s (2014) challenge to expand the metrics, while providing the niche elements that were required to study sports in this circumstance.

Analysis of the data revealed that NBA athletic departments use their Twitter account for sharing information 71.4 percent of the time (Wang & Zhou, 2015). This

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includes posts with in-game updates, ticket promotions, or news about the team, coaches, and players. Just 14.9 percent of tweets focused on interactive responses, and 13.6 percent fulfilled the community dimensions. Although previous research had shown that fans and athletic departments are interested in developing a true two-way communication relationship, just 28.5 percent of posts focused on fan engagement. Fewer than 1-in-7 tweets included direct engagement with a fan or information directly aimed at future engagement. Nearly 1,000, or 17.5 percent of posts coded as retweets.

There were significant relationships between the specific relationships dimensions and the number of engagements per post (Wang & Zhou, 2015). Tweets about NBA fanship got the most retweets ($M=111.4$) and favorites ($M=122.2$), despite representing the second smallest frequency (4.0%). Additionally, the content analysis revealed that people interacted with promotions tweets at a lower level than all other subcategories (Wang & Zhou, 2015).

Categorizing the messages into the framework proved to be one of the study's major limitations. As Wang and Zhou (2015) wrote, it was difficult to come to a consensus about how a tweet was intended; in some cases, a message could fit multiple categories and the coders had to select the dimension that fit best. Wang and Zhou (2015) recommended that future studies involved sports athletic departments from other professional leagues, as well as amateur levels.

Literature Limitations

A research gap exists in the study of athletics and relationships. As social media are a relatively new medium, many collegiate institutions and professional sports franchises did not adopt social media until the last decade. What are the implications for

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research? Due to the short history of the medium, the basis for study is limited. With a restricted body of research, the scope of study is limited to broad investigation of the field. Researchers studying athletics must add to the general theoretical framework to draw conclusions about the relationship between athletic departments and fans.

Another issue for athletics is the narrow scope of most athletics studies. Hambrick (2012) studied the Twitter promotion of two bicycle events. Hipke and Hachtmann's (2014) interviews involved only four of the 12 Big Ten Conference communications professionals. Lower-level NCAA organizations are also absent from the body of research. NCAA Division I athletic departments are widely represented; NCAA Division II, III and NAIA have not appeared in research.

More effective studies might include all the athletic departments in one professional league or in a college athletic conference, allowing for a more complete sample. The larger scope adds value to the research because trends can be seen across wider geographic and demographic lines. Leagues have diverse fan populations, which should yield a more complete data set. As of 2017, few studies involved the social media habits of entire leagues (Williams & Chinn, 2011; Gibbs, O'Reilly, & Brunette, 2014; Wang & Zhou, 2015).

Hypotheses

Relationships are a central unit in strategic public relations management. Bruning and Ledingham's (1999) Organization-Public Relationship model provided a three-category standard that measured these relationships between organizations and publics. The development of social media provided organizations sports with a tool to directly interact with audiences. Wang and Zhou (2015) studied the social media strategy of

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professional sports teams, finding that audiences interacted with community and personal relationship messages at a higher rate than professional relationship messages. No studies have analyzed the OPR model at the collegiate level.

Studying collegiate athletic departments and their audiences through the OPR model could provide these organizations with a better understanding of how to better engage key publics. The relationship between collegiate athletic departments and audiences was studied through the following hypotheses:

H₁: Tweets focused on the professional relationship dimension will have lower levels of engagement than tweets aimed at the personal and community relationship dimensions.

H₂: Tweets focused on the personal relationship dimension will have higher levels of engagement than tweets aimed at the professional and community relationship dimensions.

Social media engagement can be initiated through not only multiple messaging categories, but also various media techniques. Gibbs et al. (2014) asserted that athletic departments were more likely to use media to reach their segmented audiences than larger organizations that targeted wider audiences. Developing an understanding of which media techniques and types provide the highest levels of engagement will allow professionals to develop social media models more effectively. Media techniques will be studied using the following research questions:

RQ₁: What media techniques are being used in messages by athletic departments on social media platforms?

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RQ₂: Which media techniques used in social media messages led to the highest level of engagement?

Methodology

Data

Data obtained from the official Twitter accounts of the 10 Ohio Athletic Conference institutions was analyzed. The colleges and universities that make up the Ohio Athletic Conference (OAC) compete in athletics at the NCAA Division III level. Currently, 10 academic institutions are members of the Ohio Athletic Conference: Baldwin Wallace University, Capital University, Heidelberg University, John Carroll University, Marietta College, the University of Mount Union, Muskingum University, Ohio Northern University, Otterbein University, and Wilmington College.

The sampling process began with a search for official athletics Twitter accounts. In December 2016, links to the accounts were obtained through each athletic institutions' web pages. All ten (n=10) colleges and universities had an official department Twitter account at the time of data collection (January 23 to January 31, 2016).

Tweets were obtained from the accounts designated as official by each institution. The most recent messages were found directly on each account's timeline. Messages posted more than 60 days prior to compilation were obtained using Twitter's advanced search tool, provided free to all users. If a section of posts about a team or game continued beyond 11:59 p.m. on the day of sample, those tweets that extended beyond were included as part of a continuous intended engagement with the audience.

A constructed week sample provided the data set for the content analysis; the sample included dates between Saturday, November 12, 2016, and Friday, December 23,

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2016. The research period was chosen for its utility; November 12 was the final day of the regular season for Ohio Athletic Conference football athletic departments, with the remaining dates covering fall national championships and the beginning of winter sports schedules:

- Saturday, November 12, 2016
- Sunday, November 13, 2016
- Monday, November 21, 2016
- Tuesday, November 29, 2016
- Wednesday, December 7, 2016
- Thursday, December 15, 2016
- Friday, December 23, 2016

This sample was intended to cover a diverse cross-section of athletics. It included the following athletics seasons: men's and women's basketball, men's and women's cross country, football, men's and women's soccer, men's and women's swimming & diving, volleyball, and wrestling. By not limiting the sample to only the fall or winter season, a more diverse sample of coverage was obtained.

Categories focused on the three dimensions laid out in the original Organizational-Public Relationship (OPR) model (Bruning & Ledingham, 1999). The three categories were selected based on Bruning and Ledingham's original model. Each post was coded as either a professional, personal, or community message. Coding also placed messages into a sub-category, following the parameters of the 2015 NBA study. (Wang & Zhou, 2015) Wang and Zhou's (2015) six subcategories framed the analysis:

- Professional relationship: Information and promotion
- Personal relationship: Interactivity
- Community relationship: Activity/event, fanship, and entertainment

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Professional Relationship

Within the professional relationship exist two sub-categories: information and promotion. The information subcategory is comprised of all messages intended to inform fans. These messages primarily include general details or news about athletic departments, coaches, and players (Fig. 1). The information subcategory also includes in-game updates, as well as links to articles and other content (Fig. 2). The promotion subcategory primarily serves an advertising purpose in addition to a public relations function. Messages that share information about brand partnerships or ticketing info fit this subcategory (Fig. 3).

Personal Relationship

Only one subcategory exists under the personal category: interactivity. This type of message incorporates the two-way communication elements made possible by social media. Interactivity messages are targeted at the development of a personal relationship with fans and journalists covering a given team. These include interactions with posts made by another account, either by using the “@” symbol and sending a message or by retweeting a post (Fig. 4).

Community Relationship

Community relationship messages are separated into the largest group of subcategories. The three distinctions are activity, entertainment, and fanship. Activity messages are presented as invitations to join the team or community at an event outside of the field of play (Fig. 5). Entertainment messages, like interactivity, are broad appeals to engage with fans. These posts include media meant to purely entertain (Fig. 6). Finally, fanship messages are also retweets and replies, but are direct acknowledgements of the

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fan support (Fig. 7). For the purposes of this study, fanship was removed as a subcategory due to similarities with the interactivity subcategory. Interactivity included all posts that could have matched the fanship definition.

The data analysis was conducted using descriptive statistics and logistic regression in IBM SPSS Statistics software.

Results

Descriptive Statistics

Organization-Public Relationship Model. The constructed week sample yielded 636 tweets; this value represents a mean of 63.6 per week and 9.1 per day. The professional relationship category was the most commonly employed by the ten athletic departments, as 491 of the 636 tweets were categorized as professional in nature. Those 491 messages made up 77.2% of the sample. Of the 491 personal relationship tweets, 483 (98.3%) were coded as part of the informational subcategory; this section of the message sample focused primarily on game day and news updates. Only 8 tweets fit into the promotion subcategory, or 1.7% of the sample. Six of eight promotional tweets focused on ticket sales, with the other two promoting non-gameday events.

The personal relationship category represented 18.7% of the total sample, appearing in 119 messages. Retweets accounted for 112 of the 119 tweets coded as personal, with the other 7 coded as replies. All 119 personal relationship tweets fit into the subcategory of interactivity. Finally, the community relationship was the least used category in the organization-public model. Only 26 of the 636 tweets (4.1%) were coded as community-focused. Entertainment-based messages (n=17) were 65.4% of the sample. Messages inviting the community to an activity (n=9) represented the other 34.6%.

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Athletic Departments. John Carroll University represented the largest sample of tweets with 237, or 37% of the sample. Heidelberg University contributed the least with 19 posts, or 2.9%. John Carroll was the only university to post more than 100 times during the constructed week; the University of Mount Union was the next most active with 73 posts. Heidelberg (n=19) and Muskingum University (n=31) were the only athletic departments to post fewer than 40 times in the sample.

Analysis revealed that posts targeting the professional relationship between fans and athletic departments dominated the sample. Six athletic departments posted professional messages at a higher percentage than the mean. Four athletic departments had a sample rate of professional tweets of 90% or more, meaning that 40% of the collective Ohio Athletic Conference did not target community and personal message types. This choice to post primarily professional tweets meant a near-abandonment of audience segments that preferred direct engagement.

Only 4-in-10 teams allocated a significant portion of their messages to target personal relationships, either through replying to messages sent to their account or through retweeting messages from athletes, fans, and journalists. Marietta College (50.0%), Wilmington College (46.5%), Muskingum (36.7%), and John Carroll (22.1%) each used more than 20% of their messaging efforts to communicate and interact directly with the audience. All four athletic departments posted 20 or more interactive messages or retweets. Baldwin Wallace (2.1%), Heidelberg (5.3%), Mount Union (5.7%), and Capital (6.7%) spent fewer than 10% of the total messaging effort on interactivity. Two athletic departments, Ohio Northern and Otterbein did not post one interactive personal message in the sample.

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Ohio Northern was the only athletic department to not post a personal or community-focused message in the sample. Heidelberg, Marietta, and Mount Union also did not post a community-focused message. Community messages represented the least utilized dimension in the organization-public model by the 10 teams in the Ohio Athletic Conference. Otterbein (12.8%) spent the largest percentage of messaging developing community relationships, and John Carroll posted the most messages ($n=11$). No other athletic department posted more than five community messages: Otterbein ($n=5$), Wilmington ($n=4$), Capital ($n=3$), Muskingum ($n=2$), and Baldwin Wallace ($n=1$) each posted messages targeting the community-relationship dimension.

Four-in-ten athletic departments neglected one of the three main dimensions of the organization-public model: Heidelberg, Marietta, Ohio Northern, and Otterbein. All 10 institutions posted a message targeting professional relationships. Eight-in-ten interacted with fans directly through personal messages. Only 6-in-10 focused on building community relationships.

Engagement. Audiences engaged with community relationship tweets at the highest level; messages coded as community led all three categories in retweets ($M=9.00$) and favorites ($M=26.46$). Entertainment tweets earned an average of 12.88 retweets and 38.65 favorites. Activity tweets experienced minimal retweets ($M=1.67$) and favorites ($M=1.86$). Five entertainment-focused tweets ranked in the top-20 messages with the highest level of engagement. Tweets focused on the personal relationship had slightly lower mean levels of engagement than community tweets. Messages directed at other users and sharing content, or interactivity, averaged 8.49 retweets and 24.77 favorites.

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Interactivity messages were ranked highly in the list of most engaged tweets. Nine interactive messages ranked in the top 20 tweets overall.

Despite having the lowest levels of engagement, the most engaged with tweets in the professional category nearly topped all other messages. Four of the 12 most engaged with tweets fit in the professional category, including the top-two tweets. The engagement level of these top professional messages can be attributed to the timeliness of the news in the tweets. The top two messages concerned the victory by John Carroll University football over the University of Mount Union in November, snapping the 112-game winning streak by Mount Union. The victory led to national headlines; the circumstances of the victory led national outlets with wide audiences to share the John Carroll messages. Exposing the messages to a larger group of audiences and publics led to more total engagement.

Descriptive statistics on engagement earned by the ten athletic departments divided retweets and favorites into two separate totals. Average engagement per tweet is logged as *overall retweets* and *overall favorites*. Two separate totals, calculated by removing all retweets that were not direct responses, are named *non-retweeted retweets* and *non-retweeted favorites* (Table 3). Calculating the second set of mean favorites and retweets eliminates any potential skew caused by retweeting posts from another account. It is impossible to determine which account is responsible for engagement on retweeted posts. For example, John Carroll University hypothetically retweets a post about the Division III football championship that had 1,000 retweets and 1,000 favorites at the time of sharing. The post had 2,000 retweets and 3,000 favorites at the time of data collection. For what portion of the engagement is John Carroll directly responsible? Calculating the

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answer is impossible. Therefore, calculating a second statistic reveals the “true” engagement values for which each athletic department is directly responsible.

Heidelberg University (n=19) earned the highest levels of engagement when considering the overall sample. The 19 tweets from Heidelberg averaged 19.00 retweets and 31.63 favorites. Both totals led all ten athletic departments. Heidelberg engagement decreased to 6.92 retweets and 14.26 favorites per tweet when retweets were dropped from the sample. The Heidelberg sample fell to second in retweets and fourth in favorites in the adjusted statistic. John Carroll University averaged 10.32 retweets and 18.37 favorites in the overall sample, improving to 10.67 retweets and 19.17 favorites and when excluding retweets. The adjusted John Carroll sample ranked first in retweets and second in favorites, which is the best combined mark of any department (Table 3).

Ohio Northern University and Wilmington College recorded the least engagement of the sampled departments. Ohio Northern had only 1.41 retweets and 4.07 favorites per tweet in both the overall and adjusted samples, as no posts were coded as retweets. Wilmington posts had the lowest levels of retweets (1.29) and favorites (3.08) in the adjusted sample. After removing retweets, Wilmington engagement decreased by 65.4%, which represents the largest loss of retweets and favorites (Table 3).

Regression Model

Two logistic regression models tested the two hypotheses cited above. The regression model tested the effects of 13 independent and control variables on the dependent variable. The first dependent variable, *retweeted*, divided the sample into shared and unshared messages. The second dependent variable, *favorited*, divided the sample into liked and not liked messages. The regression model only analyzed tweets that

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experienced engagement. Messages with no retweets and no favorites were excluded completely. Excluding tweets with no engagement was expected to reveal which factors caused audiences to engage with messages. The independent variables, *professional* and *personal*, coded tweets in the same way. The *professional* variable coded all professional tweets as 1 and all *community* and *personal* tweets as 0. The *personal* variable included all personal tweets and excluded the *community* and *professional* messages.

Control variables included *links* and *photos*; the variables only analyzed messages including either links or photos. The *links* variable coded all messages with links as 1; all messages without links were excluded. *Photos* coded all tweets with photo content as 1, excluding all messages without photos. The model tested the difference in engagement between *links* and *photos* when compared to the constant, *community*.

Nine dummy variables completed the model: Baldwin Wallace, Capital, Heidelberg, John Carroll, Marietta, Mount Union, Muskingum, Ohio Northern, and Otterbein. Wilmington was excluded from the model due to engagement levels near the mean for the ten teams in the unadjusted sample. Selecting Wilmington as the basis for comparison removes any skew that could result from a highly or lowly engaged with constant dummy variable. All tweets from an individual school code as 1; all tweets from the remaining nine schools code as 0.

Organization-Public Relationship Model. Both logistic regression analyses confirmed the first hypothesis. Analysis of the effects of the models on retweets revealed a statistically significant negative relationship between professional relationship tweets and the number of retweets (Table 4). Tweets focused on the professional relationship category were engaged with at a lower rate than tweets focused on the personal or

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community relationship categories. Professional relationship tweets ($B = -1.564$) received an average of 1.56 fewer retweets than community or personal relationship messages when comparing only the sampled tweets that were engaged.

The second model revealed nearly identical results; professional relationship tweets ($B = -1.572$) earned 1.57 less favorites than an engaged tweet in the community or professional relationship category. Departments posting a higher number of professional tweets experienced a decline in overall engagement. A tweet featuring the professional relationship was 79.1% less likely to be retweeted than a community or personal message. Professional messages did not fare better in favorites, as these tweets were 80.0% less likely to be engaged with than the average message (Table 5).

The data analysis confirmed the first hypothesis, and provides more evidence for the theory that professional relationship messages are the weakest form of attempted engagement (Wang, 2015). The analysis only partially confirmed the second hypothesis. Personal relationship tweets focused on interactivity had a substantially higher engagement rate in the model than community or professional tweets. Personal messages ($B = 2.60$) earned 2.6 more retweets on average than the other two categories.

Data in the retweet model demonstrated that a personal relationship tweet was 13.52 times more likely to be retweeted than a community or professional message. The exponential increase in engagement can be explained by the viral nature of retweets. When an account retweets a post, others sharing the post can cause the engagement totals to rise. As mentioned above, athletic departments cannot claim credit for the total number of retweets. The professional relationship variable was statistically significant for

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retweets and favorites; personal relationship only had a significant value for retweets (Table 4; Table 5).

Media Effects in the OPR Model. The regression models revealed statistically significant relationships between tweets with links and/or photos and engagement. In the *retweeted* model, tweets including links ($B=1.36$) could expect 1.36 more retweets than non-linked tweets. Tweets with links are 3.91 times more likely to be shared than tweets with no links. In the *favorited* model, links ($B=.722$) did not outperform non-links by a full favorite, coming in just under three-quarters of a favorite higher.

The odds of a linked tweet being shared decreased, but outpaced non-linked tweets by 2.05 times (Table 4). Similarly, photos ($B=1.06$) earned just over 1 full retweet more than non-photos. Users were 2.88 times more likely to retweet a photo or gallery than another type of message. Photo tweets ($B=1.21$) had a higher rate of favorites than links or any other media, and users were 3.36 times as likely to favorite a tweet with photos.

Success of Social Media Models. All ten athletic departments in the Ohio Athletic Conference employed different strategies to engage their respective audiences. The nine schools (excluding Wilmington as constant) appeared and tested as dummy variables in both regression models. The data analysis identified five athletic departments as social media teams with a model that positively affected engagement, when compared to the average department (Wilmington). The five athletic departments: Baldwin Wallace, Mount Union, Muskingum, Ohio Northern, and Otterbein, had tweet samples that were engaged with at a higher level than the constant (Table 4; Table 5). Baldwin Wallace, Mount Union, and Ohio Northern registered higher levels of both retweets and favorites

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than the constant. Muskingum had a statistically significant advantage in retweets, and Otterbein held the same advantage in favorites.

Baldwin Wallace's ($B=1.33$, $B=1.57$) Twitter sample recorded more retweets at 1.33 and more favorites at 1.57 than the constant. The results were statistically significant. Users retweeted Baldwin Wallace tweets at a rate of 3.79 to 1; users were 3.79 times more likely to retweet a tweet coded as Baldwin Wallace. Baldwin Wallace tweets were favorited 1.57 more times than the constant. Users were 4.81 times as likely to favorite a tweet from Baldwin Wallace as a tweet from the constant.

The University of Mount Union also recorded higher levels of retweets ($B=1.46$) and favorites ($B=1.91$) than the constant. Users were 4.29 times more likely to retweet and 6.74 times more likely to favorite a Mount Union tweet than the constant. Out of all the dummy schools, Mount Union had the most followers with over 9,000. Finally, Ohio Northern was the third athletic department to achieve higher levels of retweets ($B=1.83$) and favorites ($B=1.71$) than the constant. Ohio Northern recorded the highest $\exp(B)$ value in the *retweeted* model, with users reporting at 6.21 times as likely to share an Ohio Northern tweet. Ohio Northern tweets 5.51 times as likely to be favorited.

Baldwin Wallace, Mount Union, and Ohio Northern each had statistically significant results. Muskingum reported a single statistically significant result. The Muskingum tweet sample averaged 1.49 retweets per tweet higher than the constant, with users 4.45 times more inclined to share Muskingum messages than the constant. Otterbein was a statistically significant variable in the *favorited* model, with a B value of 1.22 and an $\exp(B)$ of 3.37. Note: The choice was made to exclude Heidelberg from analysis due to the size of the sample. Heidelberg's sample consisted of just 19 tweets, 12

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less than any other athletic department. Thus, the inferences that can be drawn are limited. Heidelberg's engagement should be treated as an outlier. Prior research into college athletic conferences was published with less than half of the institutions participating. Excluding one OAC team does not delegitimize the study.

Media

Usage. Tweets are categorized per the following media techniques: Emoji, GIFs, links, messages, photos, replies, retweets, and videos. Emoji are symbols placed in text fields in electronic communication; the symbols include faces and other images used to convey emotion. A GIF, or Graphic Interchange Format, is a collection of pictures digitally connected to appear like a video with no sound. The distinction between a reply and a retweet is the type of message sent. A tweet that is responding to a quoted tweet is considered a retweet. A reply is a direct response to another tweet using the "@" symbol.

Frequency table analysis (Table 6) revealed the prevalence of the media techniques mentioned above among the sample of 636 tweets. Text-based messages represented the most commonly used tool in tweets, as all 636 included text. No tweets featured only media techniques, so a text-based message was included in 100% of sampled tweets. The teams in the Ohio Athletic Conference showed a clear preference for the professional relationship dimension in their collective messaging efforts. The text-based messages in the tweet sample focused on game, news, and score updates.

All ten institutions included a media technique beyond messages. Only Ohio Northern chose not to include more than one technique. Ohio Northern staff posted 44 messages; all 44 included text-based messaging and redirect links. These links were the

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only form of media shared by Ohio Northern. No team included all eight media techniques studied in the sample.

Messages held universal appeal; there was a significant drop-off in usage to the next most commonly used technique. Links appeared in 142 tweets, or 22.3% of the total sample. Institutions used these links for a wide range of purposes. Links redirected audiences to articles, gameday previews, live statistics, live video, and other content. For example, Baldwin Wallace used links to promote gameday information: “Catch Tonight's No. 24 @Jackets_Hoops and OAC MBB Action vs. @BergAthletics [LINK].” In this tweet, the Baldwin Wallace staff linked to a video stream of that evening’s men’s basketball contest, as well as tagging the two teams involved. Baldwin Wallace engaged audiences by providing three separate opportunities to link with other content.

Links often had embedded photos within the link that were displayed alongside the text-based message. Departments were choosing to redirect users back to a specific article or photo gallery. This method of photo sharing, as well as the attachment of photos to tweets, comprised 16.4% of the sample, or 104 tweets. There was significant overlap between the two techniques: 46 of the 142 tweets containing links (32.4%) also included a photo.

The main method of interactivity was through retweeting the media shared by other accounts. Tweets sharing media from other accounts made up 17.3%, or 110 of the total sample of 636 (Table 6). Replies, the other form of interactivity, were only employed 7 times in the sample. Departments directly responded to audiences in just 1.1% of the sample. The ten departments also rarely used the remaining three techniques. Emoji appeared in 17 posted tweets (2.67%), with 11 of the 17 messages featuring emoji

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posted by the same department (Table 6). 11 of Baldwin Wallace's 47 tweets featured a bumblebee emoji (representing the Yellow Jacket mascot) and the sports equipment used for that game. For example, a tweet about Baldwin Wallace wrestling included the bumblebee and fireball emoji (Fig. 2). This message indicated for fans that the match was expected to be exciting.

Departments used GIFs at a similar rate to emoji, with Mount Union (n=4), Capital (n=3), and Muskingum (n=3) using the images multiple times in messages. Only 12 total GIFs were posted, appearing in just 1.67% of the sample (Table 6). The GIFs presented an opportunity to display emotion in various circumstances, primarily in positive ones. Mount Union posted a GIF of a man dancing in his living room under the following text: "Women's Basketball: Final Score: Raiders defeat @JCUSports 86-76!!!"

The least employed technique in the sample was video. Two tweets featured videos; one was posted by Mount Union and the other was posted by Otterbein. The Mount Union video was a professional and informational post, tagged "Women's Soccer: Post game comments from Mount Union after NCAA game with #3 Trinity (TX) #gomountgo." The embedded video and link took users to a YouTube post with reaction from players following their NCAA Tournament loss. The second video, posted by Otterbein, was an interview: "John Pyles explains the importance of prioritizing academics as part of NCAA 'Pathway to Opportunity' story. Part 3." The community and fanship video was an outreach to the community to consider becoming a student-athlete (Table 6).

Effectiveness. The effectiveness of media techniques was not directly tested through hypotheses. An analysis of the mean of retweets and favorites revealed the

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effectiveness of media techniques in engaging audiences. Retweeting another account's media provided the most return engagement; sharing posts led to 8.94 additional retweets and 25.82 additional favorites (Table 7). These totals represent the second most mean retweets and highest level of favorites; however, departments sharing these posts are not able to decipher for which engagement they are directly responsible. Retweeted posts are the most difficult to measure and hold the weakest form of tracking among all media posts.

Audiences engaged with tweets including media at a higher level than the sample. Tweets with media earned an average of 6.38 retweets and 15.91 favorites. Media-driven tweets were 12.7% more likely to be retweeted and 23.6% more likely to be favorited than a tweet without media (Table 7). That type of return on investment makes it advisable for athletic departments to include media in their messages to fans.

Audiences had the highest level of engagement with tweets that included photos. These messages averaged 9.75 retweets and 23.58 favorites, significantly higher than the sample average. Tweets with links were retweeted 7.43 times and favorited 13.65 times. Tweets featuring emoji (17.00) or GIFs (18.25) had average levels of favorites higher than the mean of the sample, but fell short of the mean level of retweets. The sample size for videos was small, but the data revealed that the two videos earned an average of 8.00 retweets and 10.50 favorites (Table 7).

Links (n=142) and photos (n=104) appeared in over 100 tweets in the sample. Links and photos represented the most engaged with content categories. As the number of tweets featuring a type of media decreased, engagement decreased. Emoji (n=17) and GIFs (n=12) had decreasing levels of engagement when compared to the larger sample of

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links and photos. Replies (n=7) had minimal levels of engagement, with 0.38 retweets and 2.57 favorites per tweet. The lack of engagement with replies may be due to the nature of the response. Direct replies to users are not intended to be widely circulated as content in the same fashion as links, photos, videos, etc. These messages are intended for a more intimate audience (Table 7).

Data analysis showed that messages with links and photos had a statistically significant positive impact on engagement. Users tended to engage with posts that had clickable features or that redirected them to more content. Photo posts averaged 9.75 retweets and 23.58 favorites; these totals were the highest about all media forms studied. Links outperformed most media, logging 7.43 retweets and 13.65 favorites on average.

Ohio Athletic Conference athletic departments experienced significant engagement in tweets featuring photos. A simple message and photo sometimes exhibited viral tendencies. For example, Mount Union tweeted out a picture of a Christmas tree ornament with the university logo, with a caption of holiday wishes for their audience (Fig. 5). The simple message earned 20 retweets and 95 favorites. On December 15, 2016, John Carroll posted a photo of the football team's national semifinalist trophy earned during the postseason. The message, captioned "Our new arrival: NCAA Division III national semifinalist trophy," was retweeted 71 times and favorited 276 times.

Tweets including links recorded significant engagement as well. On November 21, 2016, Baldwin Wallace announced the promotion of their football coach to assistant athletic director via a linked message. The caption, "John Snell '87 Named Assistant Athletic Director [LINK]," redirected users to the Baldwin Wallace website and a press

release detailing the move. The tweet earned 60 retweets and 52 favorites, representing the most-engaged with message in the Baldwin Wallace sample.

Discussion

Fifty years ago, Wiebe (1963) challenged public relations professionals to examine the relationship between their organization and the public they serve. Ferguson (1984) positioned relationships at the forefront of strategic public relations management, putting out a call for measurement of the concept. Bruning and Ledingham (1999) attempted to quantify relationships through their Organization-Public Model. In the social media era, athletic researchers (Gibbs et al, 2014; Hipke & Hachtmann, 2014; Wang & Zhou, 2015) attempted to apply relationship building concepts to athletics. This study analyzed social media models of NCAA Division III athletic departments.

The modern athletic department has considerable technologies to employ as public relations tools, but none provide two-way interaction more effectively than social media. Successful departments can develop and execute a model for building and maintaining relationships, while simultaneously increasing engagement. The sample and subjects studied were different than the prior body of research, but the goal was the same: uncover the relationship model that leads to the highest level of engagement.

One major takeaway is that the regression model successfully predicted the effect of both professional and personal relationship messages on engagement. Messages directed at the professional relationship category had significantly lower levels of engagement than personal or community relationship messages. This confirmed the first hypothesis, and Wang and Zhou's (2015) report of the same effect on engagement. The model also indicated that personal tweets led only to more retweets, as the model

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examining favorites was not statistically significant. The data analysis partially confirms the second hypothesis, and supports Wang and Zhou's theory (2015) that personal relationship tweets led to higher levels of engagement. It also supports Hipke and Hachtmann's (2014) finding that athletic department officials relied primarily on personal messages to generate engagement.

Another finding was that there was no consensus among the athletic departments on if or how to balance messaging. This stands in contrast to Wang and Zhou's (2015) finding that NBA teams exhibited balance in the three OPR model categories. The descriptive statistics indicated that athletic departments that balanced messaging along all three generated higher levels of engagement. The decision on how to balance messaging appears to come from each athletic department's understanding of their respective audience. For the OAC, devoted fans remain the most important audience. This group includes the family and friends of student-athletes, the student-athletes themselves, and school alumni. This more segmented focus was apparent through the overwhelming reliance on professional relationship tweets, primarily through in-game scoring updates, news updates, and links to articles and content.

For example, Ohio Northern's model had a significant relationship with higher engagement in the regression model. The athletic department did not post any personal or community relationship messages, yet still experienced higher levels of engagement. The Ohio Northern audience engaged with the department's link-driven professional content, such as game recaps and news articles, at a more significant level than the more diverse content posted at the average school. The question is: how much engagement is Ohio Northern sacrificing through a one-sided messaging model? The Ohio Northern model

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was successful in engaging the audience, but those users did not have the opportunity to interact directly with the account or share posted content such as photos or video.

Based on these results, there is value in studying the wants and needs of an organization's audience. These audiences vary based on the size of the given institution, the surrounding community, and the popularity of the college/university or sports team. Their needs will also vary based on these factors. For example, The Ohio State University and Capital University are both located in Columbus, Ohio. Ohio State is an NCAA Division I institution with 417,000 Twitter followers. Ohio State is part of the Big Ten Conference, broadcasts all contests on the Big Ten Network, and has high name recognition globally. The school has a large alumni base and like other Big Ten teams, can put a focus on incorporating sponsors and engaging a wider audience (Hipke & Hachtmann, 2014). Capital is an NCAA Division III institution with 3,200 Twitter followers. Capital competes in the OAC, rarely has a televised contest, and has regional name recognition. As a smaller school, the audience for tweets about Capital athletics decreases, but the goal for Capital is not a national or international audience. Instead, Capital is pursuing deeply invested audiences; messages resonate differently with these committed groups than with casual fans.

Research must be modified accordingly, with the wants and needs of the audience taken into consideration. Bruning and Ledingham (1999) developed the OPR model by studying the customers of banking institutions. Wang and Zhou (2015) introduced the OPR framework to the study of athletics by applying the principles to professional sports teams. This study expanded research to collegiate level athletics. A logical next step is to

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introduce Gibbs et al. (2014) uses and gratifications research, which would add the variable of audience into the model.

The final takeaway is that including media in messages led to higher engagement. Links and photos generated more engagement for OAC athletic departments than other media types. Audiences engaged with clickable media (links, GIF, photos, video) at a higher rate than non-clickable media (emoji, text). These findings supported Gibbs' et al. (2014) research, which found that collegiate athletic departments favored links and photos as media in Facebook posts.

Limitations and Future Research

This study was the first attempt to analyze the Twitter models of the athletic departments in the Ohio Athletic Conference. It is also one of the first attempts to study the social media communication models of NCAA Division III athletic departments. It contributed to public relations research by expanding the study of organization-public relationships. This study also introduced media techniques into the body of OPR research.

Sample size directly limited the long-term impact of this study. Previous research analyzed thousands of social media posts from as many as 30 teams, while this study was limited to 636 tweets from 10 athletic departments (Wang & Zhou, 2015; Gibbs et al, 2014). Other limiting factors include the organization-public relationship model and the types of media studied.

Wang and Zhou (2015) cited the rigid nature of the six subcategories as a limitation; this analysis has the same issue. Some messages could potentially fit in two or more subcategories. Choosing one subcategory at the expense of other subcategories can

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distort the results. Future research should build a model where tweets could fit multiple subcategories, or expand the group to include more subcategories.

Future studies of NCAA Division III athletic departments should consider a long-term study of messaging beyond one constructed week. An expanded sample has value to researchers because of increased volume of messages. A replicated study with a larger sample could reveal more information on what messaging techniques lead to higher engagement, by revealing trends over a longer period. One week and an average of 60 messages gives a snapshot of relationship management and engagement. A long-term study would give researchers a wider scope of analysis.

Future studies can add to the body of research by coding tweets into multiple subcategories. Additional subcategories should be considered as well, including a split of the interactivity category into retweets and replies. Direct or quoted replies represent a different form of interactivity than a retweet of another person's post. This distinction will further segment results and eliminate labeling constraints.

Expanded media categories and techniques will add depth to future studies. Hashtags can be a beneficial way to group audiences and promote engagement, and should be considered as a media category. The hashtag is a way for users to tailor their message to fit into a group. It allows the user to search for people who have posted messages about the same subject, and lets athletic departments see messages about their programs from users who do not follow them directly. Testing the statistical significance of hashtags could open a new area into which researchers will delve.

Data analysis should be expanded in future studies. Researchers should quantify tweets with no engagement as a separate variable, allowing researchers to analyze failed

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messages. It is possible for an athletic department to have a successful segment of messages surrounded by tweets with no engagement. Studying failed messages can provide valuable feedback for professionals attempting to streamline outreach efforts. Audiences should be studied as a variable; uses and gratifications research provides a blueprint for quantitative and qualitative audience research.

Conclusion

Building a model of relationship management and engagement is a key component in the success of any public relations effort. However, relationships remain a difficult component to define in strategic public relations management. Despite these challenges, public relations models in recent years have attempted to quantify these relationships. The organization-public model is the most successful venture into the study of two-way relationships in public relations.

The OPR model provided a blueprint to examine athletic departments looking to build relationships and engage with audiences. Teams in the Ohio Athletic Conference experienced success in engaging audiences when finding the proper balance between professional, personal, and community-focused messages on Twitter. Successful departments encouraged interaction with audiences, avoiding one-way relationships that can develop through reliance on professional relationship messages. Those successful departments found innovative ways to share information through multiple types of media, including links and photos. As athletic departments continue to compete for the attention of audiences, the relationship model becomes increasingly important.

Understanding the audience, finding the right message balance, and developing engaging media will provide the road map for professionals to achieve sustained

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engagement. Understanding the successes and failures of similar organizations will lead to a more productive public relations plan. A social media strategy rooted in relationship management theory and supported by continued monitoring of engagement gives communications professionals the best opportunity to build and maintain lasting relationships with audiences.

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Appendices

Figure 1. Professional category; Information sub-category. Statistical message example.



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Figure 2. Professional category; Information sub-category. In-game update example.



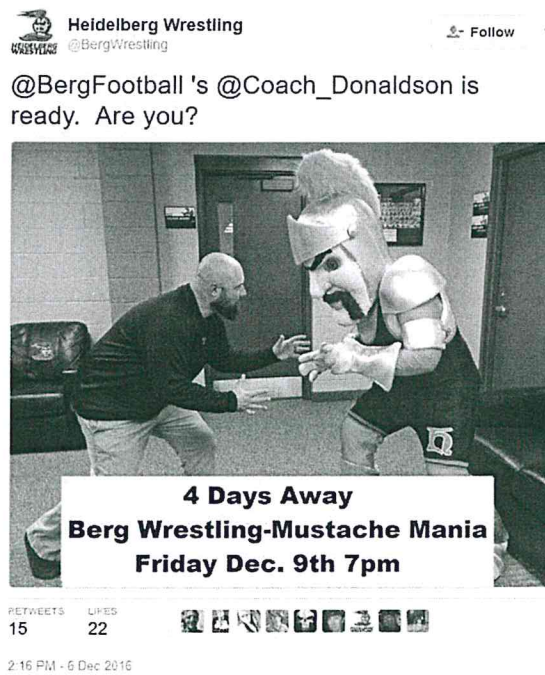
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Figure 3. Professional category; Information sub-category. Ticket promotion example.



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Figure 4. Personal category; Interactivity sub-category. Reply example.



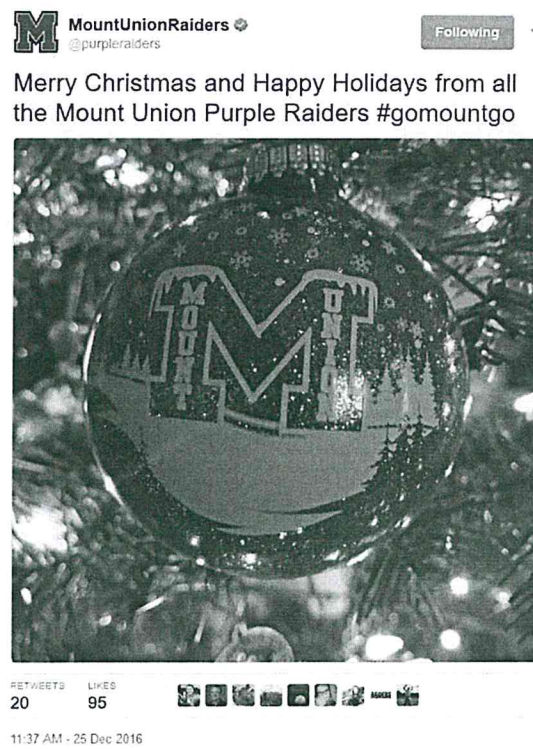
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Figure 5. Community category; Activity sub-category. Service example.



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Figure 6. Community category; Entertainment sub-category. Holiday greetings example.



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Figure 7. Community category; Fanship sub-category. Example of thanking fans.



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Table 1. Frequency of Relationship Categories

Category	Subcategory	Frequency	Percentage
Professional	Total	491	77.2%
	<i>Information</i>	483	98.3%
	<i>Promotion</i>	8	1.7%
Personal	Total	119	18.7%
	<i>Interactivity</i>	119	100%
Community	Total	26	4.1%
	<i>Activity</i>	9	34.6%
	<i>Entertainment</i>	17	65.4%
	<i>Fanship</i>	-	-
Total		636	100%

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Table 2. Retweets and Favorites by Relationship Categories

Category	Subcategory	Retweets (M)	Favorites (M)
Professional	Total	4.78	9.23
	<i>Information</i>	4.73	9.08
	<i>Promotion</i>	8.00	18.50
Personal	Total	8.49	24.77
	<i>Interactivity</i>	8.49	24.77
Community	Total	9.00	26.46
	<i>Activity</i>	1.67	1.86
	<i>Entertainment</i>	12.88	38.65
	<i>Fanship</i>	-	-
Total		5.66	12.87

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Table 3. Retweets and Favorites by Athletic Department

Athletic Dept.	Tweets	Retweets (Overall)	Favorites (Overall)	Retweets (Non RT)	Favorites (Non RT)
Baldwin Wallace	47	4.28	7.38	4.28	7.38
Capital	45	2.36	5.76	2.36	5.95
Heidelberg	19	19.00	31.63	6.92	14.26
John Carroll	237	10.32	18.37	10.67	19.17
Marietta	54	3.48	9.02	2.81	6.81
Mount Union	73	4.03	8.41	3.67	7.69
Muskingum	31	5.77	18.61	6.76	23.57
Ohio Northern	44	1.41	4.07	1.41	4.07
Otterbein	42	6.81	11.57	6.81	11.57
Wilmington	44	4.00	8.61	1.29	3.08

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Table 4. Regression Model, Retweets

Variables	B	S.E	Wald	df	Sig.	Exp(B)
Professional	-1.564	.567	7.61	1	.006	.209
Personal	2.604	.806	10.47	1	.001	13.52
Link	1.364	.282	23.33	1	.000	3.91
Photo	1.059	.338	9.81	1	.002	2.88
Baldwin Wallace	1.331	.555	5.75	1	.016	3.79
Capital	.693	.566	1.50	1	.221	2.00
Heidelberg	22.167	8382.069	.000	1	.998	4.42E+9
John Carroll	.791	.475	2.78	1	.096	2.21
Marietta	.854	.601	2.02	1	.155	2.35
Mount Union	1.457	.523	7.76	1	.005	4.29
Muskingum	1.493	.655	5.19	1	.023	4.45
Ohio Northern	1.826	.571	10.21	1	.001	6.21
Otterbein	.204	.557	.134	1	.714	1.23
Constant	.064	.643	.010	1	.921	1.07

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Table 5. Regression Model, Favorites

Variables	B	S.E	Wald	df	Sig.	Exp(B)
Professional	-1.572	.664	5.611	1	.018	.208
Personal	19.378	3,553.151	.000	1	.996	2.61E+8
Link	.722	.297	5.905	1	.015	2.058
Photo	1.213	.422	8.273	1	.004	3.363
Baldwin Wallace	1.571	.585	7.212	1	.007	4.811
Capital	.188	.563	.111	1	.739	1.206
Heidelberg	21.373	8,675.836	.000	1	.998	4.42E+9
John Carroll	.539	.482	1.250	1	.264	1.714
Marietta	.819	.631	1.682	1	.195	2.267
Mount Union	1.909	.567	11.325	1	.001	6.745
Muskingum	1.057	.684	2.390	1	.122	2.877
Ohio Northern	1.707	.606	7.920	1	.005	5.510
Otterbein	1.126	.569	4.572	1	.032	3.375
Constant	.955	.723	1.743	1	.187	2.599

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Table 6. Frequency of Media Techniques

Media	Frequency	Percentage	Retweets (M)	Favorites (M)
Emoji	17	2.7%	5.24	17.00
GIF	12	1.9%	4.92	18.25
Link	142	22.3%	7.43	13.65
Photo	104	16.4%	9.75	23.58
Reply	7	1.1%	0.38	2.57
Retweet	110	17.3%	8.94	25.82
Video	2	0.3%	8.00	10.50
Total			6.38	15.91

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Table 7. Message Balance and Engagement by OPR Category

Department	Prof.	Perc.	Pers.	Perc.	Comm.	Perc.
Baldwin Wallace	45	95.74%	1	2.13%	1	2.13%
Capital	39	86.67%	3	6.67%	3	6.67%
Heidelberg	18	94.74%	1	5.26%	-	-
John Carroll	34	72.81%	48	22.12%	11	5.07%
Marietta	39	50.00%	27	50.00%	-	-
Mount Union	158	94.44%	4	5.56%	-	-
Muskingum	17	56.67%	11	36.67%	2	6.67%
Ohio Northern	43	100.00%	-	-	-	-
Otterbein	34	87.18%	-	-	5	12.82%
Wilmington	19	44.19%	20	46.51%	4	9.30%